

Monroe County

Water Quality Management Agency

Annual Report 2002

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Monroe County Water Quality Management Agency Annual Report 2002

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I. Introduction

A. Water Quality Management Structure

The role of the Monroe County Water Quality Management Agency (WQMA) is to protect and improve Monroe County water quality at the watershed level by developing, implementing and monitoring the effectiveness of policies and programs. The WQMA is chaired by Deputy County Executive Richard Mackey and is comprised primarily of Monroe County department heads. (Figure 1 portrays the historical Monroe County Water Quality Management Structure and the relationship among the Agency, Committees, and Task Groups.)

The Water Quality Coordinating Committee (WQCC) is the technical advisory committee to the WQMA. It consists of representatives from municipal, county, state and federal governments and agencies as well as private citizens and businesses. The WQCC coordinates the implementation of water quality related activities. As part of this implementation effort, the WQCC oversees the work of the Remedial Action Plan (RAP) Task Group for Small Business Pollution Prevention. It also oversees other work groups it has established, such as those for Streambank Erosion and Stormwater. During 2002, it was decided that the major effort of the WQCC should take place at the level of one of its subcommittees, the Stormwater Coalition.

The Water Quality Management Advisory Committee (WQMAC) has been the RAP advisory committee and the public advisory committee to the WQMA. It consisted of representatives from four sectors: public officials, economic interests, environmental interests, and citizens. The WQMAC oversaw five RAP Use Impairment Oversight Committees: Drinking Water, Eutrophication, Habitat, Toxics, and a Committee for the four remaining use impairments.

In 2002, The WQMAC was discontinued as a full Committee and its membership was invited to participate in the WQCC. The role of the WQCC was expanded to include public involvement as well as public participation functions. Figure 2 portrays the current Monroe County Water Quality Management Structure and the relationship among the Agency, Committees, and Task Groups.)

Figure 1. Historical Monroe County Water Quality Management Structure

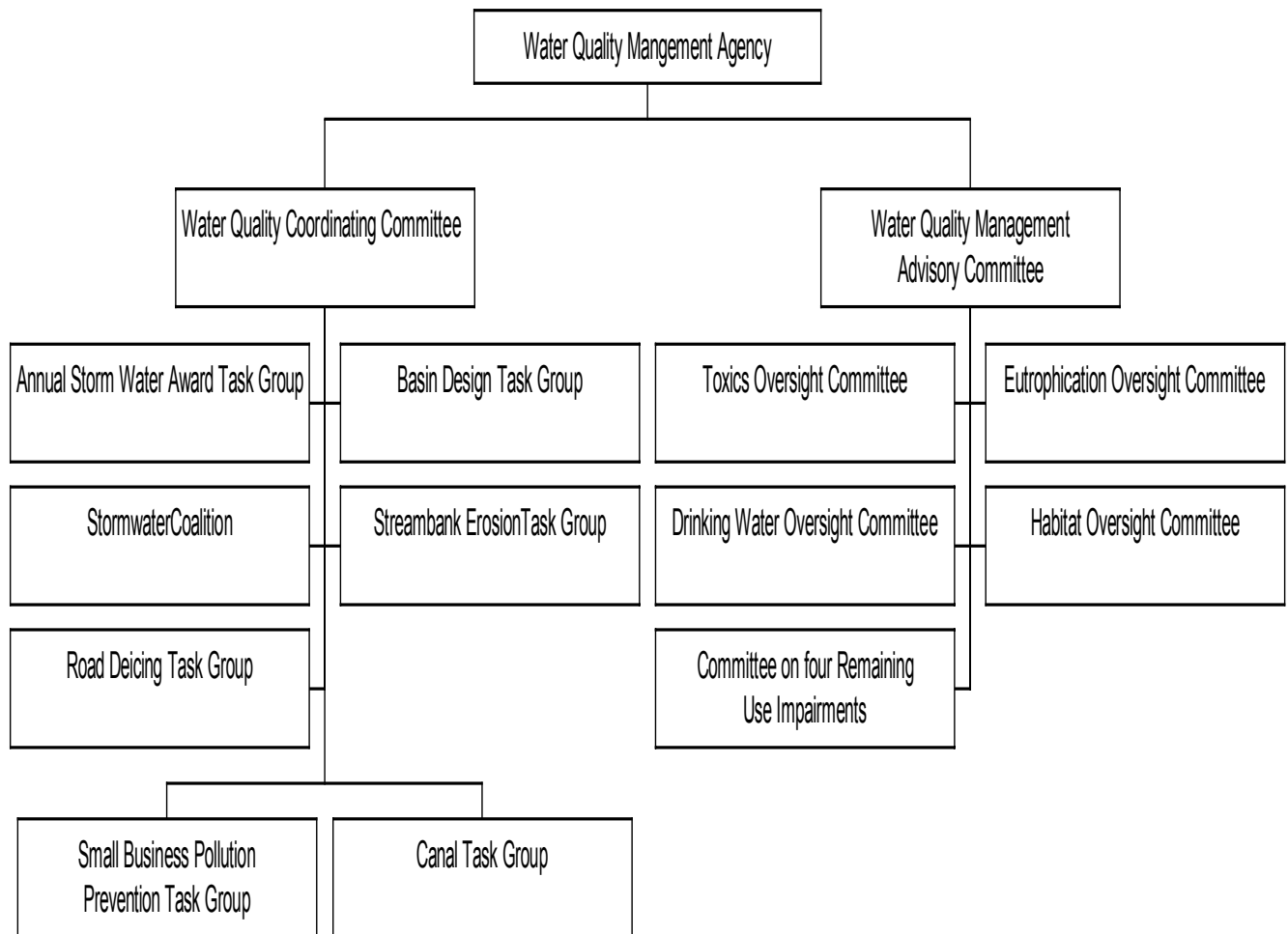
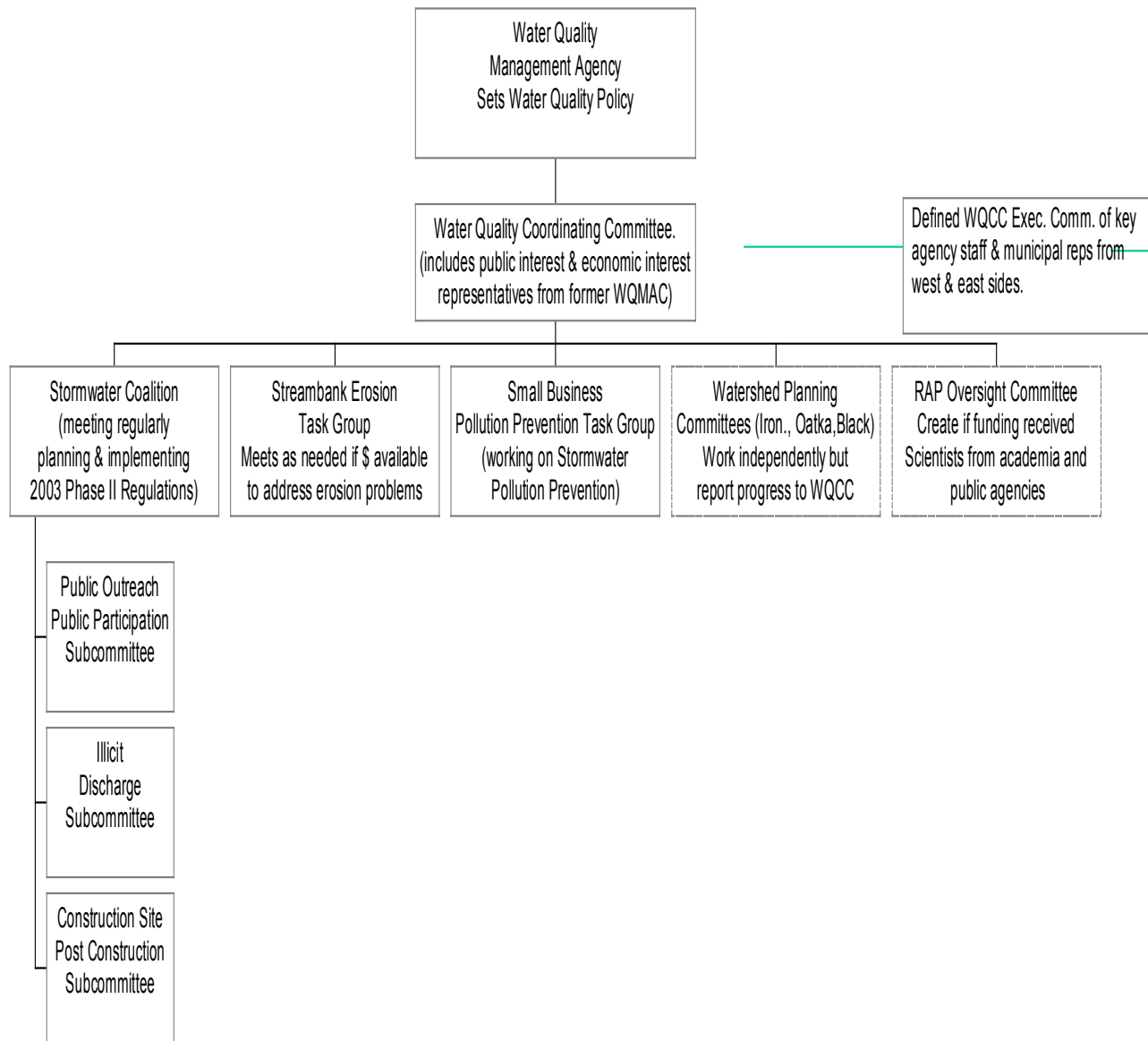


Figure 2. 2002 Water Quality Management Structure



B. Significant Economic and Demographic Changes

- According to the United States Census Bureau's 2000 census, Monroe County's population is 735,343. Based on this data, population density per square mile is 1,109 for the County and 5,988 for the City of Rochester. The 1990 census reported Monroe County's population to be 713,968 people, with a population density of 1,083 people per

square mile in the County and 6,473 people per square mile in the City of Rochester

- Based on the 2002 Land Use Report for Monroe County, Commercial development (proposed major projects, regardless of status) in 2002, was as follows:

New Commercial Development Activity, 2002	
Municipality	Gross Floor Area (square feet)
Chili, Clarkson, East Rochester, Gates, Hamlin, Irondequoit, Mendon, Ogden, Parma, Rochester, Rush, Webster, Wheatland	0
Perinton	1-15,000
--	15,001-30,000
Brighton, Greece, Pittsford, Penfield, Riga (Churchville)	30,001-100,000
Henrietta	100,001-200,000
Sweden	200,001-300,000
---	300,001-400,000
---	400,001-1,000,000
---	>1,000,000

- Municipal building permits issued for single family homes in 2002, was as follows:

Municipal Building Permits (Single Family), 2000	
Municipality	Building Permits
Brighton, East Rochester, Gates, Hamlin, Riga, Rochester, Rush, Sweden, Wheatland	0-25
Clarkson, Irondequoit	26-50
Chili, Mendon, Parma	51-75
Ogden, Penfield, Perinton, Pittsford	76-150
Henrietta	151-200
Greece	201-250
Webster	251-300

II. Water Quality Planning and Educational Activities

A. Remedial Action Plan (RAP) Implementation Activities

1. The *Stage I Rochester Embayment RAP* was published in 1993. It identified 12 beneficial uses that have been impaired due to water quality problems. The *Stage II RAP* (1997) made several recommendations for actions to address the identified use impairments. One RAP Implementation Task Group was active in 2002, the Small Business Pollution Prevention Task Group (see II.F).
2. RAP Use Impairment Oversight Committee: A committee completed draft delisting criteria (locally derived standards that will determine when a use impairment no longer exists) and monitoring methods for three use impairments: beach closings, aesthetics and plankton. The other Use Impairment Oversight Committees have already completed their initial task of developing delisting criteria and monitoring methods.
3. Four towns (Brighton, Chili, Greece and Penfield) had ongoing individual intermunicipal agreements (IMAs) with the County in 2002. An IMA was ongoing among Monroe County and four other municipalities in the Northrup Creek/Long Pond watershed, and an IMA was ongoing among Monroe County and 11 other municipalities in the Irondequoit Creek watershed. All of the towns and villages, which have formed the Stormwater Coalition, entered into an IMA to work together to prepare for federal Phase II Stormwater Regulations.
4. In addition to the RAP Task Group project, other RAP recommendations were being implemented in 2002. They were:
 - Watershed planning (see II.B)
 - Inclusion of stormwater wetlands as part of development proposals (see III.D)
 - Education on wetlands (see II.E)
 - Mercury pollution prevention (see II.F)
 - Promotion of agricultural BMPs (see III.E)
 - Swirl concentrator (underground removal of stormwater pollutants) (see III.D.1)
 - Lawn care (see II.E)
 - Storm drain stenciling (see II.E)
 - Water Education Collaborative (see II.E.)
 - Reduce/eliminate phosphorus discharges from small wastewater treatment plants (see III.C)

B. Watershed Planning

1. Watershed planning was ongoing in 2002 for the watersheds of Northrup Creek/Long Pond and Oatka Creek. The Oatka Creek State of the Basin report was completed in December 2002. (Contact Charles Knauf 274-8440)
2. Watershed plans were being implemented for the North Chili Tributary of Black Creek and Irondequoit Creek. (Contact Charles Knauf 274-8440)
3. A Watershed Assistance Grant was received from River Network (a program supported by the U.S. Environmental Protection Agency) for a State of the Basin Report for the entire Black Creek watershed. (Contact: Rochelle Bell at 274-5464)

C. Key 2001 Water Quality Management Advisory Committee Accomplishments

The WQMAC met in early 2002 and approved its merger with the WQCC. The Committee completed the task of developing “delisting criteria” for the Rochester Embayment Area of Concern (AOC). The “delisting criteria” are standards that will be used to determine when certain water quality problems are no longer present in the AOC. The WQMAC also discussed its future role and activities in WQCC and decided that it will focus on oversight of RAP implementation and monitoring progress towards delisting.

D. Key 2001 Water Quality Coordinating Committee Accomplishments

- Revised criteria for WQCC member voting privileges, abandoned membership and voting rights based on attendance due to difficulty in tracking, re-solicited involvement of non-participating members, and invited participation from WQMAC members as part of the reorganization of that group.
- Held four quarterly meetings focusing on subjects of general interest to municipal representatives. The subjects covered were: the Monroe County Stream Monitoring Program, Impacts of Deicing Chemicals, the Ontario Beach Monitoring Program, the CSX spill and cleanup, an overview of the Lake Ontario Algae workshop, the report of the Stormwater Basin Design Task group, results of the Thermal Monitoring study, and a joint meeting with the Environmental Management Council with a report on Water Quality trends and future directions.
- Supported and tracked progress of work of the Monroe County Stormwater Coalition to identify and analyze options for pooling resources to meet the Federal Phase II Stormwater Regulations.

- Sponsored optional tours for members in association with quarterly meetings. Provided tours of Rochester Museum and Science Center's underwater education project, BUBL; provided a walk of Ontario Beach with narrative on monitoring methodology at the beach, and provided a tour of Town of Greece Stormwater facilities illustrating some of the problems faced by Town staff.
- Developed a funding plan involving FLOWPA funds that allowed continuation of staffing for the Stormwater Coalition while other funding mechanisms were developed.
- Completed review and adoption of the report from the Basin Design Task Group to develop standards for pond design to maximize water quality, discourage nuisance geese, minimize maintenance, and minimize neighbor objections. Accepted update to the brochure, "Living Next to stormwater Wetlands" also completed by the Design Task Group.
- Disbanded the Canal Task Group and reassigned tasks to Bureau of Environmental Quality and Planning Department staff.
- Transferred the Burton-Jonas Stormwater Award to the American Public Works Association, which will incorporate the award and its presentation into its annual awards program.

E. Key 2002 Educational Accomplishments

1. The Water Education Collaborative (WEC)

The Water Education Collaborative's mission is to focus the combined resources of member organizations to provide water quality education services to the public within the Genesee River (Region) Watershed. The WEC is located at the Rochester Museum and Science Center.

- WEC Educational Programs include:
 - International Coastal Clean Up event – a record number of 460 volunteers picked up over 2 tons of litter along the shores of the Genesee River and Lake Ontario; WEC provided coordination, planning, implementation, publicity and finances.
 - Community Water Watch – WEC provided publicity, networking, and financial support.
 - Great Lawns/Great Lakes - WEC provided publicity, networking, and financial support.
 - 8th Annual Our Fragile World Event at the Seneca Park Zoo – WEC provided planning, publicity, and implementation assistance.
 - EPA Phase II Stormwater Regulations – the WEC is working with municipalities to determine how to assist with the public education and involvement requirements of the regulations.
 - WEC was represented at various forums and community events.
 - A play, "A Waltz Through the Watershed", was written and is shown periodically at the Rochester Museum & Science Center.

- The WEC conducted a detailed inventory of water quality education programs in the Genesee River Basin and determined what gaps exist in education.
- The WEC Director wrote and received various grants in 2002 to be spent in 2003. The total amount in grant funds is over \$85,000.
- Over 10,000 youth and adults were reached in 2002 through WEC programs.

2. Community Water Watch Program

The Community Water Watch program continued as a volunteer activity involving the residents of Monroe County in efforts to improve and sustain the quality of the waterways in our community.

a. Teams:

- Twelve new Community Water Watch Teams were established and onsite training given, bringing the current number of active teams to 42.
- Twelve CWW teams participated in the International Coastal Cleanup.
- On October 18th 2002, The Brighton High School team, along with seven other teams celebrating National Water Monitoring Day, stenciled storm drains throughout the Twelve Corners area in Brighton using maps provided by Tim Keef.
- A team of young people represented CWW at the Governor's Conference.
- Volunteers were celebrated at our International Volunteer Recognition event.

b. Training and Outreach:

- CWW workshops have been conducted in classrooms at several area school districts including; Rochester City School District (Schools #46 & #41), Webster Central Schools, Brighton High School, Eastridge Junior High School, West Irondequoit Elementary School, Spencerport Central Schools, Genesee Community Charter School, Hillele School, Pittsford High School, Leary School in Henrietta, and the University of Rochester's Life Sciences Learning Center.
- CWW and Great Lawns/Great Lakes (GL/GL) combined presentations at; St. John Fisher's Science Exploration Days, Our Fragile World event at the Seneca Park Zoo, the Science Educator's Conference, Conservation Field Days, 2002 Holiday Science & Technology Week at the Rochester Museum & Science Center, Ecology Days at Klem Road School in Webster, Nazareth College, Monroe County 4-H 100th Birthday Celebration, Lilac Festival, Save Our Sodus Inc, Gardenscape, the Monroe County Fair, and others.
- A series of lesson plans relating to watersheds, non-point source pollution, and stream monitoring have been organized and made available to enhance the NYS Science Standards for both traditional

and non-traditional educators. The plans can be used at the elementary, intermediate and high school levels.

- An article in the Town of Greece newsletter, brought in numerous phone calls and e-mails as well as two new CWW teams. It also inspired a local Boy Scout to commit his Eagle Scout project to stream monitoring, a cleanup effort, wetland and corridor planting as well as storm drain stenciling. (These activities will all be taking place in April '03).
- A quarterly newsletter was developed and distributed to approximately 380 participants.

3. Great Lawns/Great Lakes

The Great Lawns Great Lakes Program was developed by the Monroe County Cornell Cooperative Extension, the Monroe County Health Department and a citizen advisory group. Its mission continues to help people maintain healthy green lawns and protect local waterways from pollution.

- A bimonthly newsletter was developed and distributed to approximately 200 participants
- A slide show and educational notebook were developed for use by Master Gardener volunteers when educating on environmentally friendly lawn care in the community.
- Master Gardener volunteers were recruited and trained to present the Great Lawns Great Lakes (GL/GL) educational materials to small community groups.
- From January to December of 2002, over 30 GL/GL presentations were given on environmentally friendly lawn care techniques.
- Coordinating efforts between local fertilizer retailers and the GL/GL program resulted in the creation and distribution of a fact sheet about environmentally friendly lawn care that also listed which low phosphorus slow release fertilizers were available locally, and where.

4. The Monroe County Health Department Bureau of Environmental Quality:

- Instructed for the aquatics topic for the Monroe County Soil and Water Conservation District's Envirothon competition. This program assists high school students in learning about wetlands, water quality, and aquatic organisms.
- Participated for four days in the Rochester Museum and Science Center's Science and Technology Week in December of 2002
- Participated in the Community Water Watch training sessions.
- Provided equipment for the Rochester Museum and Science Center's *A River Runs Through Us* program on water quality in the Genesee River.
- Published the Summer 2002 and Winter '02/'03 issues of the *Watershed* newsletter. Each issue was mailed to approximately 2,400 people and was distributed at environmental fairs and

exhibits. The newsletter was discontinued after the last issue of 2002 due to staffing cuts in the Bureau.

- Presented/instructed for the following events and programs: “Our Fragile World” environmental fair at the Seneca Park Zoo, Conservation Field Days, and Science Exploration Days.

5. The Department of Environmental Services (DES):

- Provided materials to local groups for storm drain stenciling projects.
- DES partnered with Entercom Radio addressing proper business and residential recycling practices. The campaign highlighted the residential recycling community and water quality issues addressed by the County’s wastewater treatment facilities.
- Continued its educational efforts by visiting schools (30), community events (21) and business organizations (22), offering DES facility tours (50) serving 755 students, educational materials, personal presentations and business presentations.
- Enhanced the information on the county’s web site (www.MonroeCounty.gov) in reference to DES programs. The site now features alternative disposal options, history of the HHW program and enhanced links to other environmental organizations.
- Continued its “Chet the Cheetah” education program by distributing 15,000 calendars to all third-graders in Monroe County. In addition “Chet” unveiled his own web site promoting recycling (www.ChetTheCheetah.org) with on-line games aimed at children to promote recycling.
- Hosted the Water Environment Federation Annual spring meeting (June 2002).

6. The Soil and Water Conservation District (SWCD) and the USDA Natural Resources Conservation Service (NRCS):

- Sponsored Conservation Field Days (CFD), in cooperation with the CCE. CFD is an educational workshop held at Mendon Ponds Park where eighteen local elementary schools participate with approx. 1400 sixth graders. Students learn about environmental conservation topics during 15-minute interval sessions. Instruction assistance is obtained from dozens of area specialists and professionals, including those from MCDOH. Students are exposed to topics like recycling, composting, stormwater management, agricultural conservation, and more.
- Co-sponsored the Annual Our Fragile Earth at Seneca Park Zoo where approx. 25 environmental organizations set up display booths to educate the public on environmental issues. This education event was developed by a Remedial Action Plan appointed committee. Approximately 4000 visitors attended.
- Staff instructed at the Syracuse University Continuing Professional Education Seminar on Water Quality Management Programs.

- Presented Phase II Stormwater Regulations Workshops for private engineering firms.
- Coordinated the *Envirothon* competition for county high-school students. Topics include soils, aquatics, wildlife, forestry, and invasive species. Brighton High School won the County competition and went on to compete at the state level.
- Held *Envirothon* Workshops: A series of 2-hour workshops were hosted through the winter to help prepare area high school students for the *Envirothon* Competition.
- Nominated the Monroe County Stormwater Coalition for the Empire State Excellence in Stormwater Management Award for 2002. The Coalition won this award.
- SWCD staff team-teaches field and indoor workshops on Stormwater Management for the Monroe County Land Use Planning Training Series.
- Co-sponsored wetland field trip workshop with League of Women Voters.

7. The Monroe County Water Authority (MCWA):

- Provided school tours at the Shoremont Water Treatment Plant
- Updated the series of videos and teaching aids used to explain the treatment, distribution and quality control programs at the plant.
- Published a water quality report in conformance with the State's Annual Water Supply Statement requirement and the EPA's Consumer Confidence Report Rule.
- MCWA continued to expand its web presence at www.mcwa.com. The Authority's website includes a company profile, consumer information, as well as a treatment plant tour. There is also conservation and water quality information and a "Kids' Water Fun" page.
- Participated in the Rochester Museum and Science Center's Science and Technology Fair, the "Our Fragile World" Seneca Park Zoo Environmental Fair, and the 2002 Science Exploration Day event held at St. John Fisher College.
- Presented an overview of Monroe County drinking water at the Genesee Valley Chapter of the NY Water Environment Association's Fall Seminar and RIT's Environment Science II Course.
- Hosted a series of NYS Section AWWA Operator Training Classes for local and regional water utility personnel.

F. Key 2002 Pollution Prevention Activities

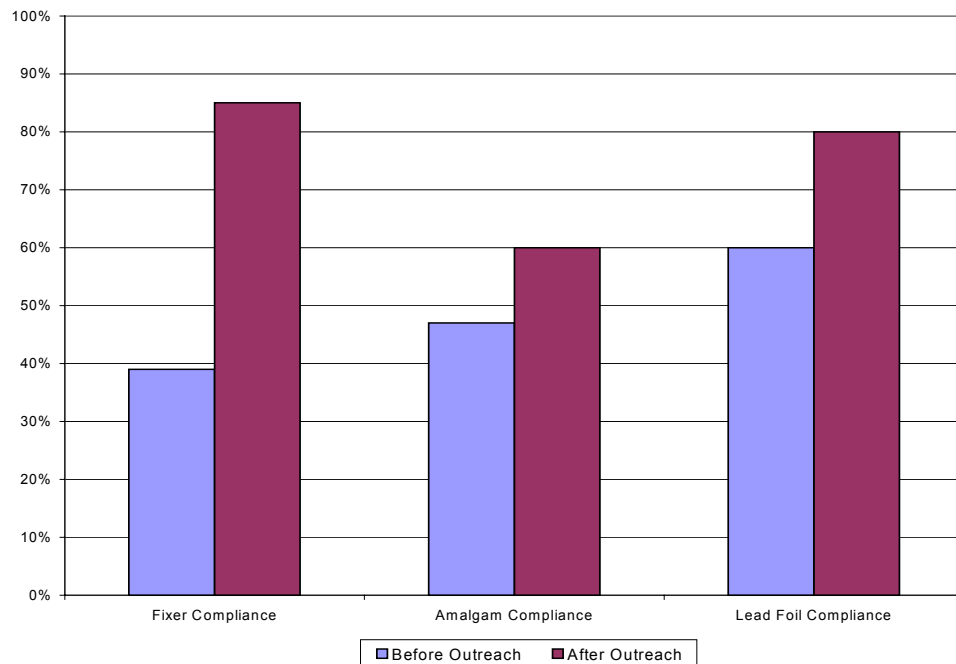
- The Department of Environmental Services (DES) continued the mercury thermometer exchange program in an effort to educate County residents on the hazards of mercury.
- The DES continued its expanded permanent Household Hazardous Waste Collection Facility hours to handle the steady demand. In addition, five mobile 'Regional' collections were held at town garages throughout Monroe County for customer convenience. The Regional collections partnered area towns and villages resulting in more cost-effective collections. See Table 1 for the 1991 - 2002 Household Hazardous Waste Collection Summary. The table reflects the total number of collection dates per year as well as the total number of residents and Conditionally Exempt Small Quantity Generators (CESQG'S) that benefited from the program. In 2002, 25% of the collected waste was removed and incinerated by Eastman Kodak and the remaining 75% was removed by Safety Kleen, a contracted waste hauler.
- The DES held it's second pesticide amnesty day for Monroe County farmers and agricultural businesses. Fourteen businesses participated, disposing of 3.3 tons of unusable pesticides. Disposal costs were covered under a grant received from the New York State Conservation Committee with money from the New York State Department of Environmental Services

Table 1. 1991-2002 Household Hazardous Waste Collection Summary

						Safety-	International		
	Perm.	Mobile	Total	Number of		Kodak	Kleen	Waste Remov.	Total
YEAR	Facility	Collect.	Collect.	Residents	CESQG's	Tons	Tons	Tons	Tons
1991	7	0	7	595	0	5.42	15.05	0	20.47
1992	18	0	18	1426	0	41.29	27.96	0	69.25
1993	18	0	18	1268	0	26.85	20.31	0	47.16
1994	18	0	18	1745	0	25.52	37.06	0	62.58
1995	17	1	18	2414	23	25.68	57.68	0	83.36
1996	14	9	23	3259	45	42.68	77.3	0	119.98
1997	11	13	24	4294	49	78.64	133.38	8.25	220.27
1998	13	11	24	5381	83	36.6	57.3	114.3	208.2
1999	24	12	36	5474	113	51.3	71.7	43.7	166.7
2000	78	1	79	4638	131	44.4	135.5	0	179.9
2001	85	9	94	7158	103	66.3	204.25	0	270.55
2002	76	5	81	5244	114	46	131.35	0	177.35
Total	379	61	440	42,896	661	490.7	953.8	166.3	1605.3

- The Small Business Pollution Prevention Task Group held a Dental Pollution Prevention workshop for the Monroe County Dental Society. This workshop was a continuation of last year's adoption of Best Management Practices to address silver, mercury and lead pollutants in dental offices. Environmental Services visited over 100 dental offices to further continue the pollution prevention education. Compliance performance has increased since the beginning of the education effort as shown in Table 2. Efforts are expected to continue through 2003 to further improve compliance performance.

Table 2. Dental Office Compliance



III. Water Quality Operations

A. 2002 Monroe County Facilities Construction Projects, Completion Dates and Contacts

Monroe County Department of Environmental Services

- Northwest Quadrant Solids Handling Modifications: one high speed centrifuge, screw conveyor system and off-load building were constructed and installed. The system became operational during

March 2002, replacing the incineration disposal process. All biosolids disposed to date have been chemically treated and disposed with refuse at the Mill Seat Landfill. (Project contact is Glenn Curtis at 760-7610.)

- Frank E. Van Lare Treatment Plant Secondary Clarifier Modifications; the corners of one Secondary Clarifier at FEV were modified during the summer of 2002 to reduce solids deposition and improve effluent quality. Historically it has been difficult to collect the secondary biosolids that collected in these corners. Filling and sloping the corners has eliminated this problem in three of the six tanks. Another clarifier will be modified during 2003. (Project contact is Dave Lukas at 760-7610.)
- Frank E. Van Lare Biosolids Off-Load Design: The biosolids disposal process will change from incineration to chemical treatment and landfiling in the near future. To implement this process change, a new facility consisting of live bottom bins for biosolids storage, and truck loading needs to be designed and constructed. Since odor control and reduction has always been a focus of plant operations at FEV, a new chemical odor treatment system will also be designed. Construction bids were advertised in late 2002. It is anticipated that award will occur in early 2003, with construction starting in late winter of 2003. The project is expected to take 18 months to complete. (Project contact Gary Hettler 760-7610.)
- Irondequoit Bay South Central Pure Waters District Collection System Improvements: A joint design and construction project between the Department of Environmental Services, Town of Webster and Monroe County Water Authority was formally contracted. The project consists of the design and construction of new sewerage collection facilities to convey District sewage flow to FEV from the Town of Webster, installation of new local sewers in the Northwest portion of the Town and Sandbar area and installation of a new water main at the Sandbar. (Project contact is Jason Kennedy 760-7610.)
- Gates-Chili-Ogden Pure Waters District; During 2002, final design of new sewerage facilities for the Village of Churchville and Mill Seat Landfill were started. The project will allow for the sewerage of landfill leachate and the decommissioning of the Village treatment plant currently discharging to Black Creek. New forcemain and pump station will convey sewage flows to District facilities for subsequent treatment at FEV. (Project contact is Jason Kennedy 760-7610.)
- Irondequoit Bay South Central Pure Waters District: During 2002 a new Engineering Consultant team was chosen to finalize design of pump, motor and control replacement for the Irondequoit Bay Pump Station. Final design is to be complete by spring 2003, with construction starting late fall of 2003. The existing pumps require significant maintenance as the equipment approaches the end of its useful life. (Project contact is Glenn Curtis 760-7610.)

- Renovation of FEV Environmental Laboratory; January 2002, the Pure Waters Laboratory and Environmental Health Dept. Laboratory were consolidated. The new lab group currently is operating at the Ames Lab. The FEV laboratory will be renovated to accommodate the new laboratory. Design and award was completed during 2002. Construction is scheduled for 2003, with an anticipated completion date of August 2003. (Project contact is Reinhard Gsellmeier)

Monroe County Department of Transportation

- (Ridgeway Ave. culvert replacement), Town of Greece, construction started in 2002 and will be completed in 2003 (Contact Alex Avdenko)
- (Salt Road culvert replacement), Town of Penfield, completed in 2002. Contact Hank Herdzik
- (Wheatland Road bridge rehabilitation), Town of Wheatland, completed in 2002. (Contact Alex Avdenko)
- (Woolston Road bridge rehabilitation), Town of Perinton, Completed in 2002. (Contact Karen Cox)
- (Lyndon Road bridge replacement), 3 bridge projects in the town of Perinton. Completed in 2002. (Contact Karen Cox)
- (Bailey Road Phase II), one culvert replaced in the Town of Henrietta, completed in 2002. (Contact Tim Frelrier)
- (Erie Station Road), one culvert replaced, Town of Henrietta, Construction started in 2002. (Contact Tim Frelrier)

B. Key 2002 Point Source Control Accomplishments and Issues at Environmental Services Wastewater Treatment Plants

- The Northwest Quadrant treatment plants high-speed centrifuge and biosolids off-load system has allowed the department to stop using incineration for biosolids disposal and start landfilling instead. The chemically treated biosolids are at about 30% solids level and processing takes one half the time as in the past. The resulting process utilizes less electric power, eliminates process natural gas and reduces air emissions. The chemical biosolids treatment and landfilling started during March 2002 with no biosolids incineration occurring since. Incineration will be used as a back up to biosolids disposal process.
- The ongoing modification of the secondary clarifiers has improved the operation of the plant. Historically it was difficult to consistently collect secondary biosolids from the corners of the clarifiers. By filling in and resloping the corners secondary biosolids can no longer accumulate reducing odors and improving effluent quality.
- The design of the FEV biosolids off load facility will enable FEV to abandon incineration by 2005. The process will be similar to NWQ's

process. Chemically treated biosolids will be dewatered with high-speed centrifuges. The dewatered and treated biosolids will be stored in live bottom bins within the completely enclosed facility. The treated biosolids will then be off loaded to dump trailers for transport to sanitary landfill(s) for disposal. The biosolids will then decompose in the landfill along with solid waste. The landfill will begin producing landfill gas earlier in the process and at higher rates. The conversion from incineration to landfilling will result in a decrease in air emissions, decrease use of natural gas for combustion and the generation of landfill gas.

- The Mill Seat and Churchville sewerage facilities project will result in the elimination of a POTW discharge to Black Creek. The wastewater flows will be pumped to GCO facilities for subsequent treatment at FEV. An improvement to Black Creek water quality will result.

C. Key 2002 Point Source Control Accomplishments and Issues at Village Wastewater Treatment Plants

1. The Village of Scottsville
 - Rebuilt #2 pump and motor- 400 GPD
 - Started supernating to head of plant by way of Greenhouse application at a much more slow and anticipated rate.
 - Sludge hauling was increased to achieve better O & M
 - Flow monitoring was conducted as part of a feasibility study to evaluate the possibility of Monroe County accepting flow from Scottsville.
2. The Village of Spencerport:
 - Continued an infiltration and inflow program including grouting of sewer joints, slip-lining of sewer mains, replacement of manholes and televising of sewers.
 - Continued voluntary phosphorus removal at the WWTP.
 - Made improvements to the ferrous chloride holding tank.
 - Continued discussions and feasibility study regarding connection of the wastewater system to the Monroe County Pure Waters system.
3. The Village of Webster:
 - Continued to operate the sludge/leaf-composting project.
 - Continued a program of grouting collection sewers to reduce the potential for infiltration of stormwater into sewers and exfiltration of sewage from the sewers.
 - Rebuilt a primary settling tank
 - Conducted testing for stormwater discharges into the system and removed some stormwater discharges into the plant

4. The Village of Churchville:
 - Continued design work for the planned sewer connection from the Village WWTP to the Monroe County Pure Waters system.
5. The Town of Webster:
 - Design work was completed and work began for a sanitary sewer collection system for the Irondequoit Bay sand bar.
 - All plant upgrades related to Phase II stormwater were completed.
 - Received wastewater from additions to the sewer collection system built by private developers. This included the addition of 2 small pump stations and added approximately 300 households to the system.
6. The Village of Honeoye Falls
 - Work began to replace the existing sand filter system with a new disc filter system. The project will be completed in 2003.
 - GIS mapping of the entire sewer system was completed.
 - The upgrade from an 8" to a 12" sewer line in the vicinity of North Main St. was completed.

D. Key 2002 County Stormwater Management Accomplishments

1. The Soil and Water Conservation District (SWCD)
 - The District completed monitoring the effectiveness of an underground proprietary product designed to remove stormwater pollutants, provided PHASE II Stormwater technical assistance to newly regulated municipalities, and assisted in developing an outline stormwater management plan for PHASE II Communities.
 - Worked to complete Tier III plans on agricultural land in the Northrup Creek Watershed and Oatka Creek Watershed. Comprehensive Nutrient Management Plans are being developed on farms and fertilizer and nutrient recommendations will be made on over 6,000 acres
 - Provide on-going assistance to Confined Animal Feeding Operation (CAFO) farmers and planner/consultants in developing CNMPs to meet federal water quality requirements.
 - Resolved runoff issues in suburban/agricultural areas and provided technical assistance to farmers regarding water quality and erosion control issues.
2. Monroe County Department of Transportation
 - Converted an existing "dry" pond, owned and maintained by the Town of Henrietta, into a "wet" pond to improve stormwater quality as

- part of the adjacent Erie Station Road project. A portion of the highway drainage system is now being routed through this facility.
- Mitigated damage to an existing wetland and created new wetland areas adjacent to the Erie Canal as part of the Lyndon Road project.
- Used current accepted erosion control measures as part of every construction project.

3. Monroe County Health Department Bureau of Environmental Quality:

- Municipalities within the Irondequoit Creek Watershed, in cooperation with the U.S. Geological Survey, continued work on a project to create a mathematical model of the watershed. The model will be useful in predicting the impacts of current and future changes in land use and potential flood storage on water quantity and quality. The municipalities include the Counties of Monroe and Ontario, the Towns of Penfield, Brighton, Henrietta, Perinton, Pittsford, Mendon, and Victor, and the Villages of East Rochester, Pittsford, and Fairport. Municipal representatives provided data on land use and zoning changes over the past 20 years for incorporation into the model. Hydrologic components of the model were completed and training was held in the fall of 2002. Work continued on the water quality components, with model completion anticipated in the spring of 2003.
- Staff from the Bureau of Environmental Quality, working with the Soil and Water Conservation District and representatives from municipalities in the County, updated the *Living Next to Stormwater Wetlands* brochure distributed to property owners living adjacent to detention basins maintained for water quality improvements. The brochure was updated to address concerns about aesthetics, West Nile Virus, and nuisance waterfowl.

E. Key 2002 County Agricultural Operation Accomplishments

1. The USDA Natural Resources Conservation Service (NRCS):

- Maintained conservation plans on 18,000 acres of highly erodible cropland
- With the assistance of the USDA Farm Service Agency, kept 739 acres of environmentally sensitive cropland under permanent vegetative cover through the Conservation Reserve Program.
- Received over \$42,000 through the Agricultural Management Assistance program to control erosion on ~500 acres of cropland.
- Restored 10 acres of degraded wetland under the Wetlands Reserve Program. Accepted 50 new acres into the program.

- Planted 23-acres of warm season grasses and maintained 12-acres of upland bird habitat under the Wildlife Habitat Incentives Program. Accepted 40 new acres into the program.
- Provided assistance to 3 municipalities in ranking Farmland Protection Program proposals. An offer for ~ \$200K was made to one municipality, however the offer was declined.
- Provided on-going assistance to farmers and planners/consultants in meeting federal water quality requirements.
- Resolved runoff issues on suburban/agricultural areas and provided technical assistance to farmers regarding water quality and erosion control.
- Provide on-going assistance to the Monroe County Soil and Water Conservation District in their effort to meet the needs of their customers

IV. Water Quality Monitoring and Regulatory Activities

A. Key Results of the Recent Ambient Water Quality Monitoring by the Bureau of Environmental Quality

- Monitoring conducted on discharges from the Erie Canal indicated that a discharge through the Fairport Waste Channel in the Village of Fairport of approximately 3 cubic feet per second (cfs) throughout the 2001 operating season was reduced to approximately 1 cfs during the 2002 operating season. This discharge carried an average Total Phosphorus (TP) load of approximately 0.24 kg/day, or approximately 2% of the TP goal of 14 kg/day for the entire Irondequoit Creek watershed. This load reduction is consistent with the reduction in discharge at this site. Total loading from Canal sources to the Irondequoit Creek watershed in 2002 was approximately 1.5 kg/day, or approximately 11% of the TP goal for the entire watershed. The high overall percentage in 2002 of phosphorus entering the stream from the canal serves to underscore the significance of Canal input to Irondequoit Creek during baseflow periods.
- Monitoring was also conducted on the Erie Canal discharge to Northrup Creek in Spencerport. In 2002, an average of 4.3 cfs was discharged from the Canal to the Spencerport Waste Channel, which flows into Northrup Creek above Big Ridge Road. These flows serve as dilution water for the effluent from the Spencerport Wastewater Treatment Plant, which discharges to Northrup Creek between Big Ridge Road and Ogden Parma Town Line Road. Sampling conducted upstream of the Canal Waste Channel, and below the Canal Waste Channel at Big Ridge Road indicated that in 2002, the Canal was responsible for the addition of an average of 0.73 kg/day of total phosphorus to Northrup Creek. An additional average increase of 5.1 kg/day total phosphorus

was measured between Big Ridge Road and Ogden Parma Town Line Road during 2002, likely the result of the discharge from the Wastewater Treatment Plant.

- Rochester Embayment monitoring for eutrophication indicators continued in 2002. Phosphorus concentrations in the near-nearshore of the Rochester Embayment (1 meter depth) were tracked and found to be higher than the approximately 10 meter depth concentrations measured in samples collected in cooperation with Rochester Gas and Electric Company at the Russell Station plant.
- Monitoring of Irondequoit Bay demonstrated that the continued addition of oxygen to the metalimnion of the Bay has been effective in delaying the onset of anoxia in the hypolimnion of the Bay until late summer. It has been effective at maintaining oxygen levels suitable for zooplankton and some higher consumers throughout the summer. The amount of oxygen necessary to maintain these conditions declined again in 2002. However, discussions held with NYSDEC during the spring of 2002 raised issues with the efficiency of oxygenation and the continued effectiveness of the alum coating applied to the deep areas of the Bay during 1986. As a result of these discussions, BEQ staff began working with Dr. Mark Noll of SUNY at Brockport to conduct an evaluation of the alum coating and phosphorus release rates in the deep basin of Irondequoit Bay. Funding was received from the Great Lakes Research Consortium for this project, which is to be conducted during the summer of 2003.
- Closures of the swimming area at Ontario Beach due to intermittent water quality impacts occurred in 2002. Swimming was permitted in some sections of the beach area, or for some part of a day, on 52 or 71% of the possible days. The tool for the evaluation of the performance of the Ontario Beach Model, which was developed in 1998, indicated that in 2002 the model correctly predicted safe swimming conditions 81% of the time, and correctly predicted unsafe swimming conditions 89% of the time.
- Samples of atmospheric deposition, groundwater, and surface water were collected for chemical analysis at several sites throughout Monroe County. This was done as part of the cooperative monitoring program with the United States Geological Survey and indicated no significant changes from previous years. Concentrations of all constituents monitored were within the historical range of the period of record for each station.

B. Key Results of the Most Recent Best Management Practices Effectiveness Monitoring by the Bureau of Environmental Quality

- On average, for 2002 the efficiency of nutrient removal by the weir at the Irondequoit Creek Narrows was 13%. The efficiency was low in 2002 because the annual precipitation was below average. More precipitation results in more stormwater runoff and thus higher removal efficiencies. Stopgates and stop-logs were in place for most of the operating season but may not have had a significant effect due to the low flow conditions and small number of runoff events experienced during the summer and fall.
- At the end of the 2001 fiscal year, the Environmental Health Laboratory (EHL) was merged with the Department of Environmental Services Pure Waters Laboratory. Former EHL staff responsible for educational, data analysis, and project implementation and management are now housed in the Monroe County Health Department Division of Environmental Health, Bureau of Environmental Quality.

C. Key Results of 2002 County Wastewater Monitoring

- The FEV treatment plant had four (4) excursions to the plant discharge permit in 2002. Three of the excursions were exceedances of the settleable solids permit limit of 0.3 ml/L. The three settleable solids excursions occurred during wet weather events at the treatment plant. Plant flows were roughly two to three times greater than normal conditions. The required modifications to the plant process to deal with the high flows could not eliminate the effects of high flow. Uses are being refined to the System rain gauges to help us predict plant flows and better prepare for operations during a wet weather event. The other settleable solid excursion and a fecal coliform excursion were related to a significant break in the force main from the Irondequoit Bay District pump station. Repair of this main pumping system took over seven days to complete. During that time frame, flows could only be conveyed using large 1500 HP pumps. This meant short periods of pumping at a high rate, which tripled the normal flows and loading rate to the treatment plant. This large variation in flow and loading resulted in a settleable solids and fecal coliform excursion.
- The NWQ treatment plant had six (6) excursions to the plant discharge permit in 2002. During Feb. 2002, high flows caused the plant influent BOD to be very dilute and though the effluent BOD concentration was only 12 ppm, far below the 30-ppm limit, the 85% removal requirement could not be met. During the month of April, total precipitation was 3.34 inches. This precipitation caused high plant flows all month. As a result, the plant flow averaged 22.2 mgd for the month while our permit limit is 22.0 mgd. A total suspended solids excursion for pounds discharged occurred due to high monthly flow and a suspended solids

85% removal excursion occurred due to the very dilute influent suspended solids concentration. On May 29, the plant experienced flow rates five times the average volume normally treated at the plant. Total precipitation was 2.12 inches for the day. Because of this high flow, the plant had a settleable solids excursion as well as an excursion to 85% BOD removal limits. The Towns discharging to our system have historical storm water inflow and infiltration problems. This problem causes large amounts of storm water to enter the sanitary sewer system. The Department is working with these municipalities to try and identify problem portions of the sewer system. Long term corrective solutions to the problems will then be identified and recommended.

D. Key Results of 2002 Onsite Sewage Facilities Programs

- It is estimated that onsite sewage disposal systems serve approximately 25% of the homes in Monroe County or about 60,000 households. Onsite systems also serve many commercial and industrial properties. Regulation of these facilities is the responsibility of the Monroe County Health Department under Article 17 of the NYS Environmental Conservation Law, the NYS Public Health Law, and the Monroe County Sanitary Code. Following are some key individual sewage disposal (ISD) program statistics for 1999, 2000, 2001 and 2002. Note that in 2000 and 2001, site inspections and construction inspections have been combined.

Program	Category	2000	2001	2002
Residential ISD	# Plans Approved – ISD	117	117	123
	# Site Inspections	840	951	758
	# Construction Inspections	470	547	681
	# Construction Permits – ISD Repairs	245	237	204
	# Plans Approved – Realty Subdivision/ISD	7	5	7
	# Site Inspections – Realty Subdivision/ISD	328	475	267
	# Construction Inspections	691	802	697
	# Complaints	117	68	78
	# Enforcement Actions	8	6	6
Commercial/Industrial ISD	# Plans Approved	6	11	14
	# Enforcement Actions	0	0	1

E. Key Results of Stormwater Management Project Review and Stormwater Management Inspections

The Monroe County Soil and Water Conservation District reviewed 22 development projects for impacts from stormwater runoff as part of the Monroe County Development Review Committee process, which was administered by the Monroe County Planning Department. The District met with consultant engineers and municipal building department staff to negotiate solutions to stormwater management problems. In most cases, stormwater runoff mitigation practices were provided.

F. Key Results of Hazardous and Toxic Materials Disposal Programming

1. Hazardous Materials and Stream Pollution Complaint Response (contact: Richard Elliott, 274-6067)

The Monroe County Department of Health serves as the first responder to hazardous materials and stream pollution complaints for the NYSDEC under a Letter of Agreement between the County and NYSDEC. Following are some key program statistics for 2000, 2001 and 2002.

<u>Program</u>	<u>Category</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Hazardous Materials	# Incidents Reported	515	703	521
	# Field Responses	156	181	119
	# Haz-Mat Team Responses	60	87	111
<u>Program</u>	<u>Category</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Stream Pollution	# Complaints	69	28	15
	# Field Responses	40	13	6

In December a CSX freight train carrying coal and two hazardous chemicals (acetone and methylene chloride) sped out of control from Kodak Park and ultimately crashed along River Street, north of the Stutson Street Bridge. Approximately 16,000 gallons of acetone and 16,000 gallons of methylene chloride were released to the environment. NYSDEC is overseeing the clean up of the site by CSX and their contractors.

2. NYS Hazardous Waste Site Program

a. Hazardous Waste Sites

Status of Monroe County Inactive Hazardous Waste Sites

	<u>2000</u>	<u>2001</u>	<u>2002</u>
# of sites	48	51	53
# of Class 2a sites (inadequate data)	3	5	4
# of Class 2 sites (significant threat)	30	30	33
# sites delisted *	1	2	1
<i>Sigismondi</i>			
# sites added	1	3	3
<i>ITT (Rochester Form Machine)</i> (Class 2)			
<i>Abandoned Chemical Sales</i> (Class 2)			
<i>640 Trolley Blvd.</i> (Class 2)			
# Preliminary Site Assessments completed			
using State Superfund	1	1	2
<i>Abandoned Chemical Sales</i>			
<i>640 Trolley Blvd</i>			

* Delisted sites are sites that have been remediated and found to be nonhazardous

(Note that there are also some Class 3, 4 and 5 sites in the County.)

b. Hazardous substance sites (The definition of “hazardous substance” is broader than “hazardous waste.”)

In 1994 New York State Law was amended to require the NYSDEC, in consultation with the New York State Department of Health, to conduct a study and inventory hazardous substance waste sites in New York State. The study was completed in 1995 and listed 24 sites in Monroe County, 12 of which were sites that were removed from the inactive hazardous waste sites list. The status remained unchanged in 2002.

c. Brownfields

In the fall of 1996 New York State voters approved the Clean Water/Clean Air Bond Act. This action established a \$200 million Environmental Restoration Project Fund, known as the Brownfields Program. The following is the status of sites in Monroe County that have been approved for funding under this program.

Site	Applicant	Status
APCO/Artuso	Rochester (C)	Investigation completed/Interim Remedial Measure (IRM) completed; remediation is essentially complete.
Photech	Rochester (C)	Investigation completed/IRM completed; a new consultant has been hired to complete the site investigation and remedial action reports.
Gonsenhauser Farm	Brighton (T)	Investigation completed. A Record of Decision (ROD) was signed; The town agreed to enter into a voluntary cleanup agreement to implement the ROD.
1200 East Main St.	Rochester (C)	Investigation completed; a supplemental investigation is pending.

d. Voluntary Cleanup

The NYSDEC has developed a program designed to promote voluntary cleanup and/or investigation of contaminated sites including inactive hazardous waste sites [other than Class 1 (imminent danger) and Class 2 sites], petroleum-contaminated sites and solid waste disposal sites. A volunteer (i.e. developer, municipality or a responsible party) enters into an agreement with NYSDEC, which provides clear guidelines regarding the identification of site contamination. The agreement also contains a specific remediation plan and schedule. The volunteer can obtain a release from further liability for past contamination at the site once agreed-upon cleanup levels are reached. There are approximately 30 sites in Monroe County for which investigation and remediation were initiated under the Voluntary Cleanup Program (VCP). New sites in the VCP in 2002 include:

- RG&E Brewer Street
- Brainerd Manufacturing
- Carlson Park
- Barthelmes Manufacturing
- CSXT River Street Derailment

CSXT spill occurred in December 2001. However, an IRM was completed under a VCA that was signed in 2002. Contaminated soil was excavated from both sides of the railroad tracks and along the

Genesee River bank and disposed off site. Contaminated groundwater was also disposed offsite. Residual contamination remains at depth (>4 feet). Sediment in the Genesee River was also impacted. CSXT's consultant is developing plans for dealing with the residual contamination on land and sediment contamination in the river.

Following are some highlights of the hazardous waste site program for 2002 in Monroe County:

- GE and 3M Brockport Sites – The companies completed remediation of segments 1 and 2 of Tributary 3 of Brockport Creek. Segment 3 is scheduled for completion in 2003. The storm sewer was also cleaned; additional testing indicates the bituminous coating in the storm sewer is contaminated with PCBs; DEC has asked that GE address this newly found contamination. The onsite storm sewer at the former GE plant was sampled and remediated (cleaned or replaced); additional sampling is scheduled. Former residential property on the East Side of Oxford St. was remediated and was graded, sodded and planted with deciduous and evergreen trees.
- Golden Road Site – The Record of Decision was signed in October 2002.
- Bausch & Lomb Frame Center Site – A proposal for a commercial development has been made and is under review.
- Arch Chemical - The Record of Decision was signed in March 2002.
- Erdle Perforating – A plan for additional investigation was approved.
- Burroughs/Unisys – a petition to delist the site is under review.
- ITT Automotive (former Delco) – A consent order was signed in 2002.
- Abandoned Chemical Sales – Indoor air sampling was conducted by NYSDOH; no impacts from the site were detected.
- 640 Trolley Blvd. – Classification was changed from 2a to 2.

G. Key Results of Drinking Water Monitoring

The Monroe County Water Authority (MCWA) supplies drinking water to 650,000 people on a retail and wholesale basis. In 2002 there were no treatment plant or distribution system bacteriological or chemical Maximum

Contaminant Level violations. The MCWA's two treatment plants were in full compliance with all current operational, monitoring, and reporting requirements. The water provided by the MCWA consistently met or exceeded all New York State and EPA drinking water standards. MCWA's 2002 Annual Water Quality Report is available on the web at www.mcwa.com. The report can also be obtained by calling MCWA Customer Service at 442-7200.

F. Recommended Changes in Surface and Groundwater Classification

The Monroe County Water Quality Coordinating Committee (WQCC) discussed the need to recommend changes to surface and groundwater classifications at meetings held in May and June of 2002. It was agreed that recommendations made in previous WQMA Annual Reports should be made again and highlighted in a letter to the New York State Department of Environmental Conservation. Those recommendations follow:

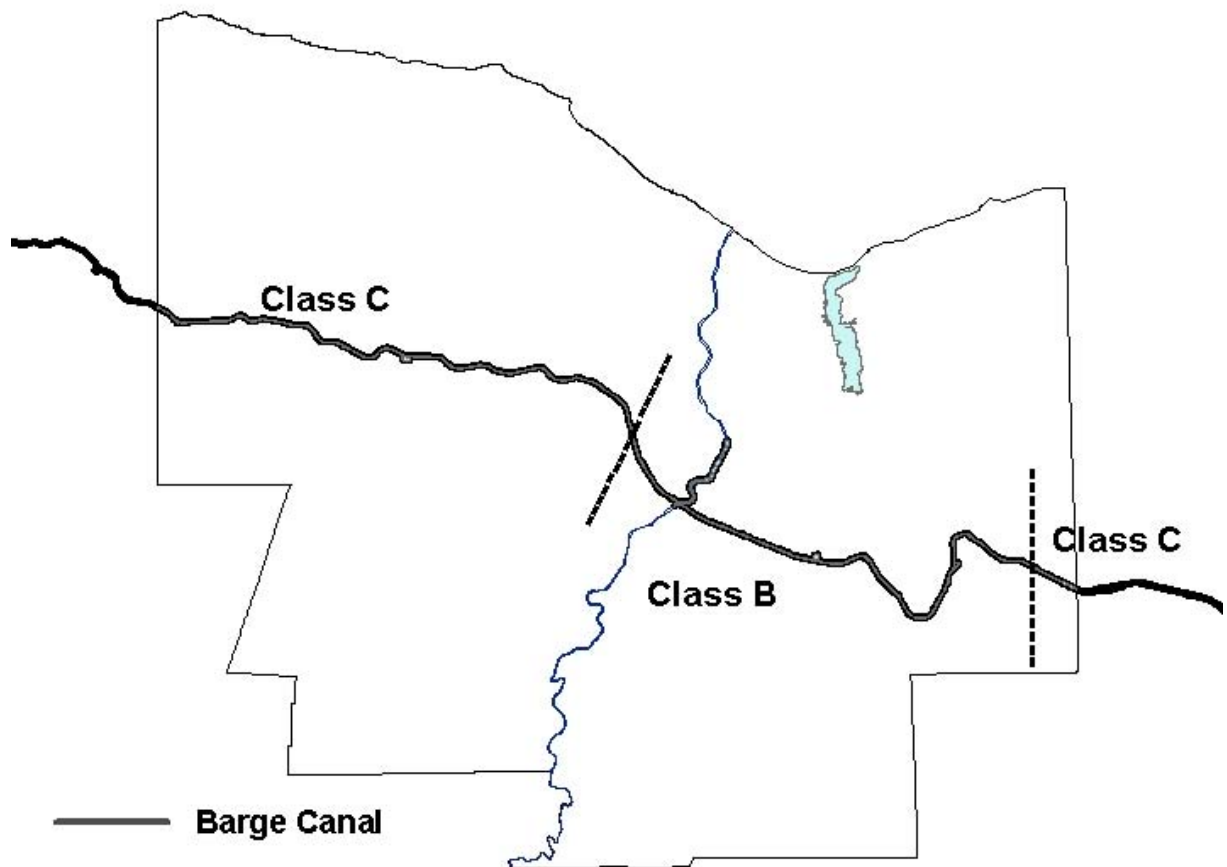
One concern is the classification of the New York State Barge Canal (also known as the Erie Canal) as it goes through Monroe County. The current classification of the Canal is Class C (best use determined by NYSDEC to be fishing and boating) from the Orleans County line Monroe County until the area 0.3 miles northwest of the Lee Road bridge near the Route 390 crossover. From this point east to Lyndon Road in Perinton, the Canal is classified as Class B (best use determined by NYSDEC to be swimming). From Lyndon Road eastward to the Wayne County line it is then reclassified as C. (See Figure 3) It is the recommendation of the WQCC that the entire stretch of the Canal within Monroe County be classified as Class B in order to ensure consistency throughout Monroe County.

The Genesee River is designated as a Class C stream from Livingston County to the point where Oatka Creek enters the Genesee River. From that point to the mouth of the River, it is designated as Class B. The WQCC recommends that the Genesee River be classified as Class B throughout Monroe County. The WQCC also recommends that NYSDEC investigate classification of other reaches of the Canal and Genesee River to gain consistency within counties.

Furthermore, Monroe County recommends that the NYSDEC enter into a dialogue with the Monroe County WQCC regarding reclassification of tributaries of Class B streams in Monroe County. We request that the dialogue be initiated at the December, 2003 meeting of the Monroe County WQCC. Class B streams with tributaries that warrant a reclassification discussion include those tributary to Mill Creek, Shipbuilders Creek, Four Mile Creek, Hipp Brook, Commission Ditch, and some headwaters of Irondequoit Creek, Thomas Creek, and Allen Creek. These tributaries in some cases may be intermittent in the summer or in other cases have been incorporated into urban drainage systems that need some regular maintenance to ensure good flow of water. The County would like to

discuss options to ensure protection of these resources while avoiding complex permitting procedures currently required to allow municipalities to maintain flow in such small protected streams.

Figure 3. NYSDEC Classification of the Barge Canal in Monroe County.



V. Future Programming: Summary of 2002 Program Types and Referral to Water Quality Coordinating Committee Workplan

The Water Quality Coordinating Committee's 5-year workplan is available from the Monroe County Department of Health. This plan outlines monitoring, planning, operations, and education projects that are being conducted now or will be considered in the future by Monroe County Departments; the Environmental Management Council; the New York State Department of Environmental Conservation; the Monroe County Water Authority; the Monroe County Soil and Water Conservation District; the Natural Resources Conservation Service; the City of Rochester; Towns; the New York State Department of Transportation; Cornell Cooperative Extension; and the Water Education Collaborative.

In 2003 water **monitoring** programs will be conducted in Irondequoit Bay and Creek; the Genesee River; Oatka, Black and Honeoye Creeks; Northrup Creek; the Erie Canal; the nearshore areas of Lake Ontario; and public beaches. Monitoring through response to complaints is also ongoing. Monitoring of several streams is also underway by volunteer stream teams through the Community Water Watch Program. The State University of New York at Brockport received a grant to evaluate the status of the alum coating of the deep basin sediments of Irondequoit Bay. The fieldwork of this project is due to be completed in 2003, with the report expected in 2004. This work will be valuable in determining the future course of action necessary to continue improvement of Bay water quality. In addition, County funds and grants have been obtained to conduct a survey of algae growth in Lake Ontario through the use of hyperspectral imaging. Field activities discontinued in September of 2001 were resumed in 2002, and a final report is expected in 2003. The report may indicate large areas of growth and suitable habitat in the western part of the Rochester Embayment, and areas to the west of the embayment. The Rochester Institute of Technology conducted this work. The Health Department, in cooperation with N.Y. Sea Grant, the Great Lakes Research Consortium and the Water Education Collaborative, held a workshop to examine the factors contributing to algae growth in Lake Ontario and potential solutions to address this problem. An information-sharing network has been developed and maintained as a product of this workshop. The U.S. Fish and Wildlife Service has obtained funding to monitor Genesee River water quality and habitat for the potential use of the native sturgeon. During 2003, 4-year old fish will be introduced to the mouth of the Genesee River in cooperation with the NYSDEC. A County Environmental Report Card that summarizes environmental trends is available and is in the process of being updated (call 274-6067).

Planning projects ongoing in 2003 include several projects recommended in the *Rochester Embayment Remedial Action Plan* and other planning documents. Some examples include; development of a stormwater management strategy to meet Federal Phase II Stormwater regulations and the filing of Notices of Intent by the MS4 members of the Stormwater Coalition; West Nile Virus response planning; highway maintenance erosion control; a harbor management plan for the waterfront edge of Irondequoit Bay in the Towns of Irondequoit, Penfield and Webster; geographic information system data development; the development of small watershed plans and a watershed model; development plan review; grant applications for new projects; environmentally sensitive land acquisition; farmland protection; agricultural management planning; wastewater treatment facility upgrade planning, and a project to address water quality problems at Charlotte Beach. A competitive grant was received in 2002 to initiate a watershed plan for the Black Creek Watershed. The plan was completed with the publication of a State of the Basin report to be completed in 2003.

Significant **operations** projects include implementation of agricultural best management practices, pollution prevention activities, household hazardous waste collections, unused agricultural pesticides collections, brownfield cleanups, watermain extension project to remediate effects of a hazardous spill, installing new sludge handling systems in sewage treatment plants, highway stormwater management system construction, and geese management.

Educational efforts expected to continue in 2003 include administration of the Community Water Watch Program (CWW), the Great Lawns/Great Lakes Education Program (GL/GL), the continued employment of the Volunteer Coordinator for the CWW and GL/GL programs, wetlands and stormwater education efforts, West Nile Virus education, operation of the Water Education Collaborative organization, and special events.